

# Unleashing the Nuclear Watchdog

## Strengthening and Reform of the IAEA

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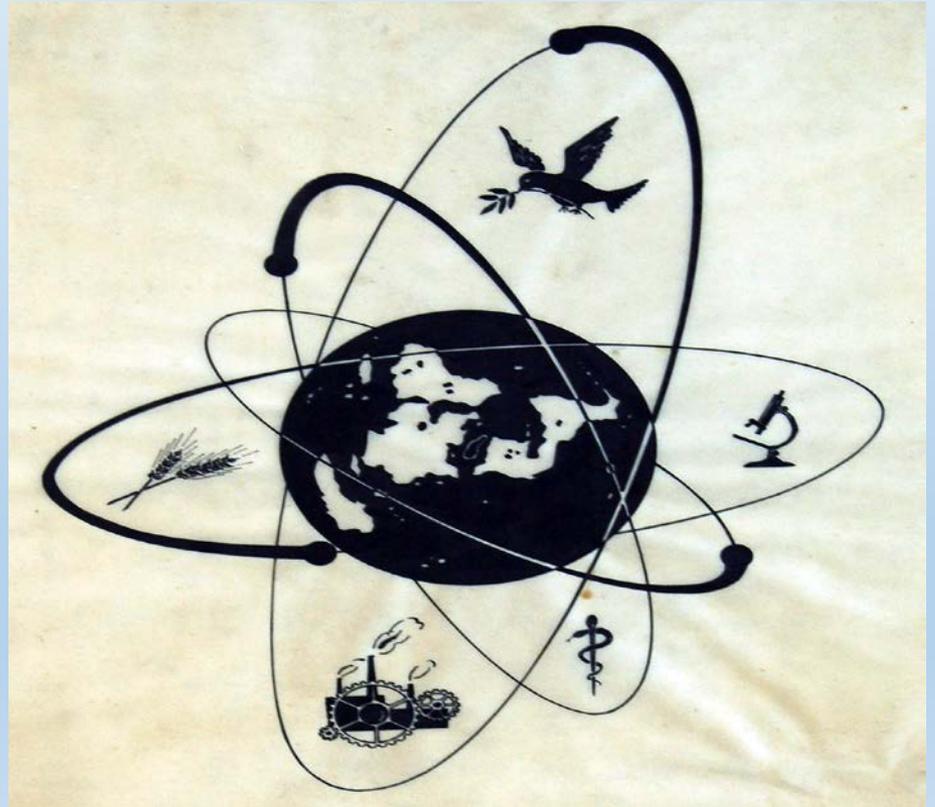
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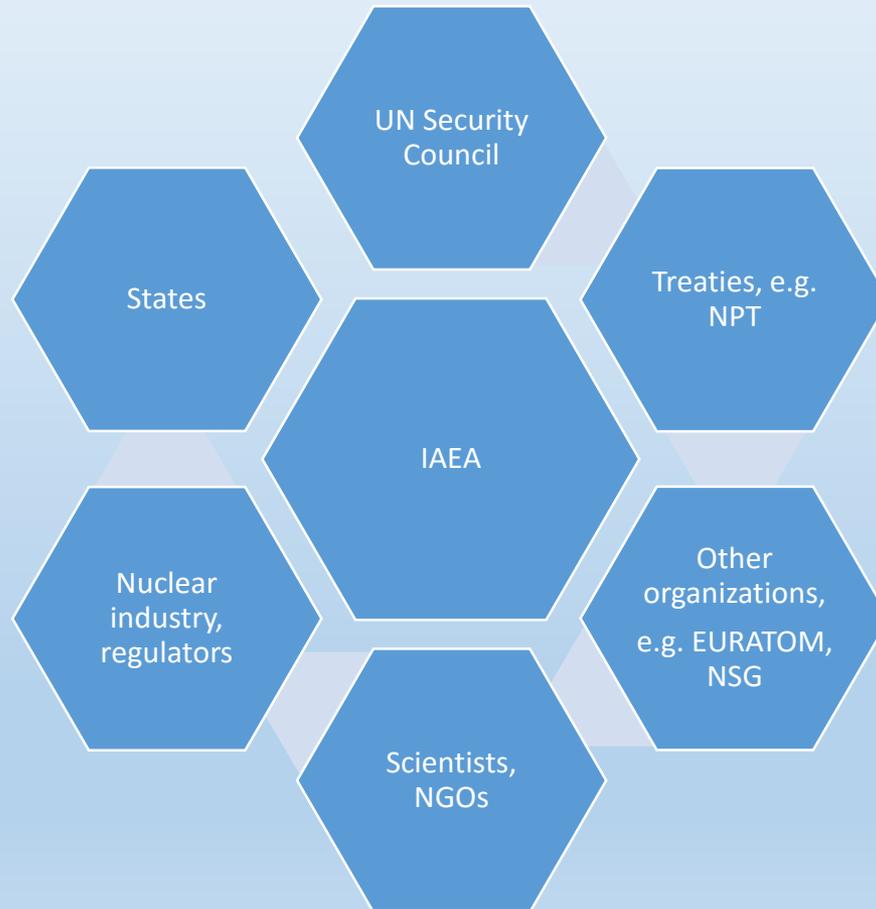
**16 November 2016**



# Overview

- situating the IAEA in the global governance architecture
- history, mandates and organization
- role and performance: safeguards, safety and security
- reform and strengthening ideas
- future challenges

# Situating the IAEA in Global Nuclear Governance Architecture



# Origins

- 1953** Inspired by President Eisenhower's Atoms for Peace speech
- 1956** Statute negotiated by small group of states led by the US; endorsed by UN General Assembly
- 1957** Statute entered into force and Agency established in Vienna



# Purpose of the IAEA

“The Agency shall seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world.

It shall ensure, so far as it is able, that assistance provided by it or at its request or under its supervision or control is not used in such a way as to further any military purpose”.

Article II, IAEA Statute, 1957



# An eventful history

- 1963 Soviet about-face on safeguards
- 1970 Nuclear Non-Proliferation Treaty
- 1971 Comprehensive safeguards (INFCIRC/153)
- 1974 India's 'peaceful nuclear explosion'
- 1986 Chernobyl
- 1986 Nuclear accident conventions
- 1991 IAEA Iraq inspections begin
- 1993+2 strengthened safeguards
- 1993 South African disarmament verified
- 1993 IAEA uncovers DPRK non-compliance
- 1993 A.Q. Khan network revealed
- 1994 verification activities in Libya
- 1994 Nuclear Safety Convention
- 1997 Joint Convention on Spent Fuel & Radioactive Waste
- 1997 Additional Protocol
- 2001 post-9/11 foray into nuclear security
- 2003 further Iraq inspections
- 2003 Iranian non-compliance discovered
- 2007 Syrian reactor bombed
- 2011 Fukushima
- 2015 Iran agreement

# The IAEA at 60

“An independent, intergovernmental, science and technology-based organization in the United Nations system that serves as the global focal point for nuclear cooperation”

Member states 168

Governance General Conference, 35-member Board of Governors

Director General Yukiya Amano

Secretariat 2,300, incl. c.250 inspectors

Infrastructure safeguards system; Seibersdorf labs; regional offices;

Regular Budget A\$520m

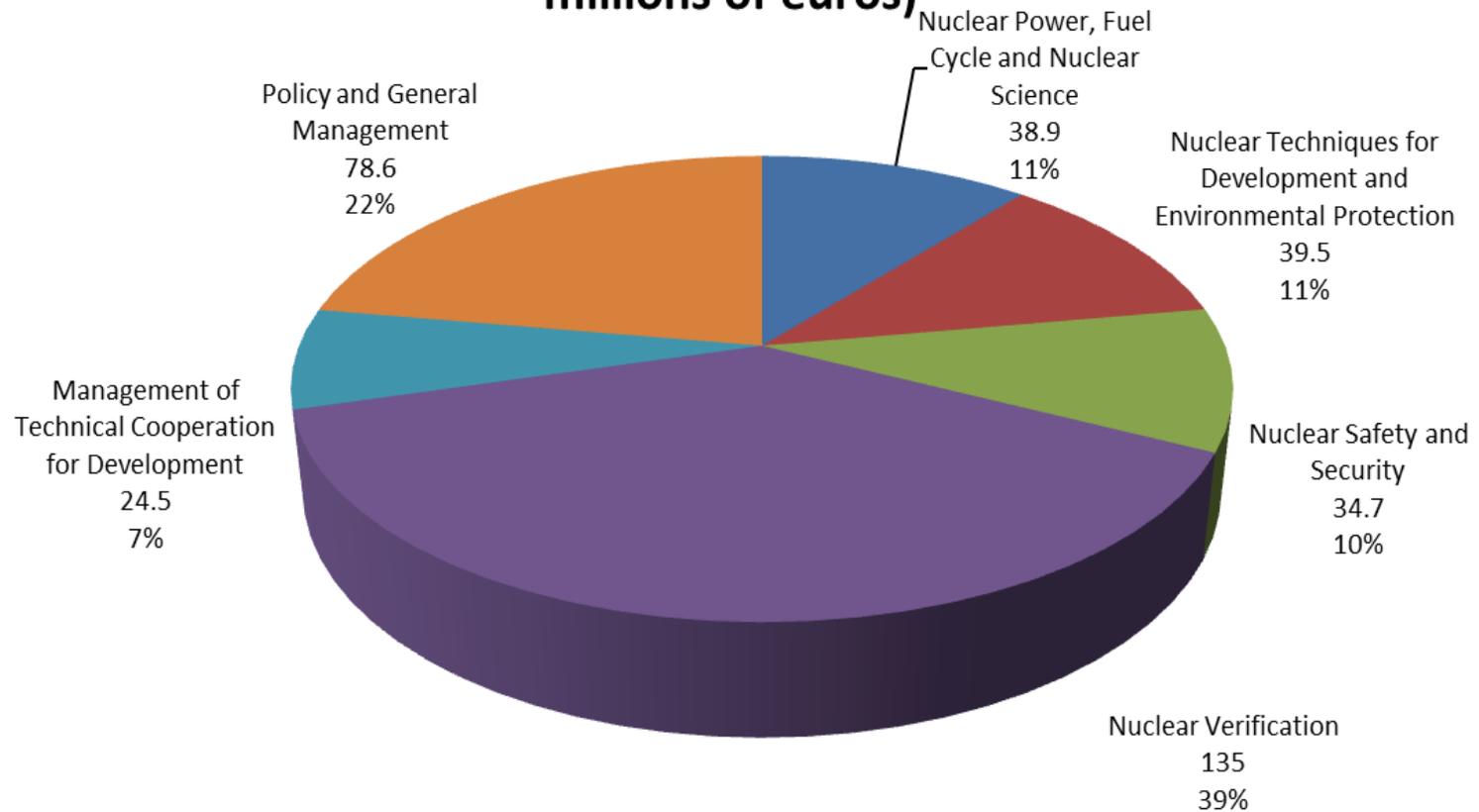
Total budgetary resources A\$736m



# Not all mandates created equal

Major program	Mandate source	Legal status	Funding
Safeguards	Statute; NPT; NWFZs	Legally-binding	Regular budget + voluntary
Safety	Statute; Nuclear Safety Convention	Broad legal obligations but non-mandatory standards	Regular budget
Security	CPPNM & Amendment; Board decisions	Broad legal obligations but non-mandatory guidelines	Largely voluntary
Peaceful uses	Statute	n/a	Regular budget + voluntary
Technical Cooperation	Board decisions	n/a	Largely voluntary

## 2016 Operational Regular Budget by Major Program (in millions of euros)



Source: IAEA, The Agency's Programme and Budget 2016-2017, GC(59)/2, Vienna, July 2015.

# Safeguards: the post-Iraq 'revolution'

- 1992 revelations about secret Iraqi weapons program 'over the berm'
- crisis for the credibility of safeguards
- change driven by Director General Blix and key member states
- strengthened safeguards system (program 93+2)
- all-source information to be exploited: open sources; intelligence; satellite imagery; remote monitoring; new technology

# Strengthened safeguards

## Part 1 Measures under existing legal authority

- Special Inspections
- advance notification of design information
- remote monitoring
- environmental sampling

## Part 2 Additional Protocol

- voluntary addition to Comprehensive Safeguards Agreements
- strengthens IAEA inspection powers and information-gathering
- states to supply 'cradle to grave' information
- safeguards gold standard: 127 now in force

# New philosophy & culture

## **New philosophy**

- ‘correctness and completeness’
- state-level approach
- the ‘broader conclusion’
- integrated safeguards

## **Change in inspector culture**

- more inquisitive, investigatory
- more freedom to resolve issues on-site



# Continuing safeguards challenges

- **Political:** Russia
- **Legal:** safeguards and AP not universal
- **Conceptual:** 'Broader conclusion' applied inconsistently: Ukraine, Japan
- **Technological:** detecting undeclared facilities/materials
- **Human resources:** Iran case drawing expertise; generational turnover
- **Funding:** linked to Technical Cooperation

# Safety: Fukushima wake-up call

- Agency caught flat-footed despite post-Chernobyl reforms
- Amano failed to put IAEA at centre of crisis
- Incident and Emergency Response Centre worked well but..
- Japan declined to trigger assistance mechanism
- Agency warned Japan about regulatory capture but Tokyo ignored it
- Agency slow to send assessment teams (but once there they performed well)



# Reform window opens ... briefly

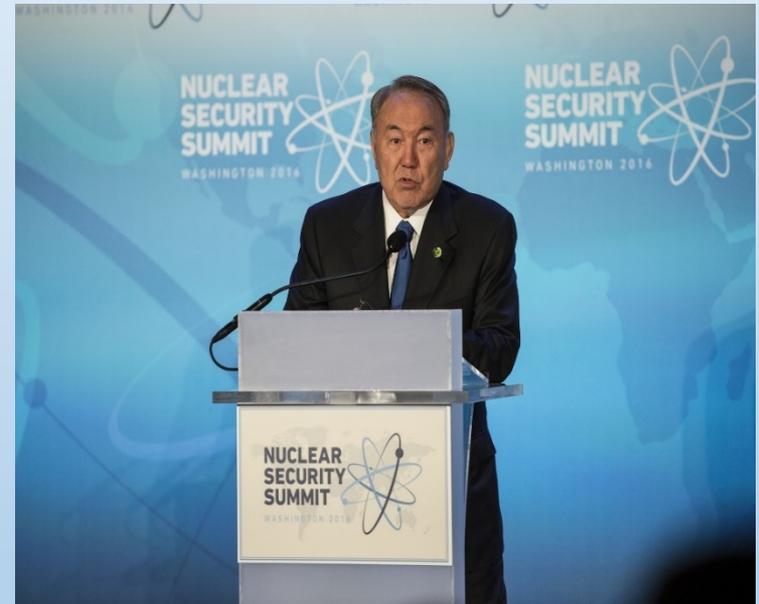
- France, Russia, others called for mandatory safety standards and mandatory, periodic peer reviews of all nuclear power plants
- while Amano dallied the window closed
- Amano's compromise: voluntary peer reviews every 3 years; improved voluntary standards
- 2012 IAEA Action Plan on Nuclear Safety unambitious, slow, no major systemic reform
- but many states have unilaterally improved nuclear safety
- IAEA Incident and Emergency Response Centre transformed: lessons learned about public communication

# Nuclear Security

- long struggle to legitimize IAEA involvement
- 9/11 provided impetus
- states still hyper-sensitive about nuclear security
- IAEA sets voluntary guidelines, provides assistance, training, organizes peer reviews
- IAEA Illicit Trafficking Database
- Voluntary funding through Nuclear Security Fund
- IAEA just one of several nuclear security entities (Global Initiative to Combat Nuclear Terrorism; International Convention on Suppression of Acts of Nuclear Terrorism; UNSC resolution 1540)

# Post-summit orphan?

- Nuclear Security Summits (2010-2016) boosted profile of nuclear security and IAEA role
- 2016 Summit's IAEA Action Plan but no new resources
- May 2016 entry into force of Amendment to Convention on Physical Protection of Nuclear Material
- Summit momentum is lost: work of the post-Summit Contact Group desultory
- focus now on December 2016 IAEA Nuclear Security Conference



# Strengthening and Reform

- **Wholesale reform unnecessary:** an effective and efficient organization overall, but strengthening definitely needed
- **Governance:** hold GC biannually; elect all Board seats on regional basis; scrap Board expansion
- **Safeguards:** continued strengthening via Strategic Plan; AP as gold standard; culture, technology, for detecting undeclared activities/facilities
- **Safety:** fulfil post-Fukushima action plan, including public outreach
- **Safety and security:** legally binding, greater transparency, attention to synergies
- **Budget and finance:** grand-bargain between: safeguards, security and Technical Cooperation; ending 'free-riders'; more creative fund-raising
- **Technical Cooperation:** improving implementation and relevance
- **Technology:** keep up with state of the art, especially IT and detection

# Challenges for IAEA

- mixed future of nuclear energy/new technology
- Iran: momentous decisions ahead
- leadership: Amano and post-Amano
- old superpowers behaving badly? Putin and Trump

